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NEW MEXICO
ENVIRONMENT DEPARTMENT

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BUTCH TONGATE
Cabinet Secretary-Designate

J. C. BORREGO
Deputy Secretary

Certified Mail - Return Receipt Requested

January 11, 2017

Mr. Jared Langenegger
City Manager
City of Tucumcari
215 East Center Street
Tucumcari, NM 88401

Re: Major Municipal; SIC 4952; Compliance Evaluation Inspection; City of Tucumcari Wastewater Treatment Plant; NPDES Permit No. NM0020711; November 14, 2016

Dear Mr. Langenegger:

Enclosed please find a copy of the report and check list for the referenced inspection that the New Mexico Environment Department (NMED) conducted at your facility on behalf of the U.S. Environmental Protection Agency (USEPA). This inspection report will be sent to the USEPA in Dallas for their review. These inspections are used by USEPA to determine compliance with the National Pollutant Discharge Elimination System (NPDES) permitting program in accordance with requirements of the federal Clean Water Act.

Introduction, treatment scheme, and problems noted during this inspection are discussed in the "Further Explanations" section of the inspection report.

You are encouraged to review the inspection report, required to correct any problems noted during the inspection, and advised to modify your operational and/or administrative procedures, as appropriate. If you have comments on or concerns with the basis for the findings in the NMED inspection report, please contact us (see the address below) in writing within 30 days from the date of this letter. Further, you are encouraged to notify in writing both the USEPA and NMED regarding modifications and compliance schedules at the addresses below:

David Long
NPDES Industrial & Municipal Section
US Environmental Protection Agency, Region VI
Enforcement Branch (6EN-WM)
1445 Ross Avenue
Dallas, Texas 75202-2733

Sarah Holcomb
New Mexico Environment Department
Surface Water Quality Bureau
Point Source Regulation Section
P.O. Box 5469
Santa Fe, New Mexico 87502

If you have any questions about this inspection report, please contact Barbara Cooney at (505) 827-0212 or at barbara.cooney@state.nm.us.

Sincerely,

/S/ Sarah Holcomb

Sarah Holcomb
Acting Program Manager
Point Source Regulation Section
Surface Water Quality Bureau

cc: Carol Peters-Wagnon, USEPA (6EN-WM) by e-mail
David Long, USEPA (6EN-WM) by e-mail
Brent Larsen, USEPA (6WQ-PP) by e-mail
Gladys Gooden- Jackson, USEPA (6EN-WC) by e- mail
NMED District 3 Michael Kesler, Manager by e-mail

Form Approved
OMB No. 2040-0003
Approval Expires 7-31-85

NPDES Compliance Inspection Report

Section A: National Data System Coding

Transaction Code	NPDES	yr/mo/day	Inspec. Type	Inspector	Fac Type
1 **N** 2 **5** 3	**N M 0 0 2 0 7 1 1** 11 12	**1 6 1 1 1 4** 17 18	**C** 19	**S** 20	**1**

Remarks

T U C U M C A R I W W T P M A J O R

Inspection Work Days	Facility Evaluation Rating	BI	QA	Reserved
67 **1** 69	70 **3**	71 **N** 72	**N** 73 74	75 **M A J O R** 80

Section B: Facility Data

Name and Location of Facility Inspected *(For industrial users discharging to POTW, also include POTW name and NPDES permit number)*

Tucumcari Wastewater Treatment Plant – North on 1st St., cross over RR tracks, 0.4 miles to Maple St., turn right onto Maple, left onto Rock Island to WWTP.

Quay County

Entry Time /Date
12:30 Hours / Nov. 14, 2016

Exit Time/Date
17:50 Hours / Nov, 14, 2016

Permit Effective Date
October 1, 2015

Permit Expiration Date
September 30, 2020

Name(s) of On-Site Representative(s)/Title(s)/Phone and Fax Number(s)

Calvin Henson, Superintendent 575-461-4542

Janet Garcia, Laboratory Analyst 575-461-4372

Other Facility Data

Latitude N 35° 11' 48.90"
Longitude W 103°43'04.94"

SIC 4952

Name, Address of Responsible Official/Title/Phone and Fax Number

Mr. Jared Langenegger, 215 East Center St., Tucumcari, NM 88401/ City Manager/ 575-461-3451, fax 575-461-2049

Contacted
Yes [ ] No [X]

Section C: Areas Evaluated During Inspection

(S = Satisfactory, M = Marginal, U = Unsatisfactory, N = Not Evaluated)

S	**Permit**	**N**	**Flow Measurement**	**M**	**Operations & Maintenance**	**N**	**CSO/SSO**
S	**Records/Reports**	**M**	**Self-Monitoring Program**	**S**	**Sludge Handling/Disposal**	**N**	**Pollution Prevention**
M	**Facility Site Review**	**M**	**Compliance Schedules**	**M**	**Pretreatment**	**N**	**Multimedia**
M	**Effluent/Receiving Waters**	**S**	**Laboratory**	**N**	**Storm Water**	**N**	**Other:**

Section D: Summary of Findings/Comments (Attach additional sheets if necessary)

See the Further Explanations Section of the report for details.

Name(s) and Signature(s) of Inspector(s)	Agency/Office/Telephone/Fax	Date
/S/ Barbara Cooney	**NMED/SWQB 505-827-0212 / 505-827-0160**	***1-10-2017***
Signature of Management QA Reviewer **/S/ Jennifer Foote**	**Agency/Office/Phone and Fax Numbers** **505-827-0187 / 505-827-0160**	**Date** ***1-10-2017***

Tucumcari Wastewater Treatment Plant	**PERMIT NO. NM0020711**

SECTION A - PERMIT VERIFICATION

PERMIT SATISFACTORILY ADDRESSES OBSERVATIONS ☒ S ☐ M ☐ U ☐ NA (*FURTHER EXPLANATION ATTACHED No)*

DETAILS:

1. CORRECT NAME AND MAILING ADDRESS OF PERMITTEE ☒ Y ☐ N ☐ NA

2. NOTIFICATION GIVEN TO EPA/STATE OF NEW DIFFERENT OR INCREASED DISCHARGES) ☐ Y ☐ N ☒ NA

3. NUMBER AND LOCATION OF DISCHARGE POINTS AS DESCRIBED IN PERMIT ☒ Y ☐ N ☐ NA

4. ALL DISCHARGES ARE PERMITTED ☒ Y ☐ N ☐ NA

SECTION B - RECORDKEEPING AND REPORTING EVALUATION

RECORDS AND REPORTS MAINTAINED AS REQUIRED BY PERMIT. ☒ S ☐ M ☐ U ☐ NA (*FURTHER EXPLANATION ATTACHED No)*
DETAILS: There are no records of the volume and the quality of waste entering the system from the Tucumcari Mountain Cheese Factory as required in Part II of the permit; Some DMR reports not received by NMED and/or EPA.

1. ANALYTICAL RESULTS CONSISTENT WITH DATA REPORTED ON DMRs. ☒ Y ☐ N ☐ NA

2. SAMPLING AND ANALYSES DATA ADEQUATE AND INCLUDE. ☒ S ☐ M ☐ U ☐ NA

a) DATES, TIME(S) AND LOCATION(S) OF SAMPLING ☒ Y ☐ N ☐ NA

b) NAME OF INDIVIDUAL PERFORMING SAMPLING ☒ Y ☐ N ☐ NA

c) ANALYTICAL METHODS AND TECHNIQUES. ☒ Y ☐ N ☐ NA

d) RESULTS OF ANALYSES AND CALIBRATIONS. ☒ Y ☐ N ☐ NA

e) DATES AND TIMES OF ANALYSES. ☒ Y ☐ N ☐ NA

f) NAME OF PERSON(S) PERFORMING ANALYSES. ☒ Y ☐ N ☐ NA

3. LABORATORY EQUIPMENT CALIBRATION AND MAINTENANCE RECORDS ADEQUATE. ☒ S ☐ M ☐ U ☐ NA

4. PLANT RECORDS INCLUDE SCHEDULES, DATES OF EQUIPMENT MAINTENANCE AND REPAIR. ☒ S ☐ M ☐ U ☐ NA

5. EFFLUENT LOADINGS CALCULATED USING DAILY EFFLUENT FLOW AND DAILY ANALYTICAL DATA. ☒ Y ☐ N ☐ NA

SECTION C - OPERATIONS AND MAINTENANCE

TREATMENT FACILITY PROPERLY OPERATED AND MAINTAINED. ☐ S ☒ M ☐ U ☐ NA *(FURTHER EXPLANATION ATTACHED Yes)*
DETAILS: The permittee is not managing nor controlling the influent waste from the Tucumcari Mountain Cheese Factory. This influent can be causing interference with the proper operations of the WWTP. – Collection system collapsed under the Highway I-40

1. TREATMENT UNITS PROPERLY OPERATED. ☒ S ☐ M ☐ U ☐ NA

2. TREATMENT UNITS PROPERLY MAINTAINED. ☐ S ☒ M ☐ U ☐ NA

3. STANDBY POWER OR OTHER EQUIVALENT PROVIDED. ☒ S ☐ M ☐ U ☐ NA

4. ADEQUATE ALARM SYSTEM FOR POWER OR EQUIPMENT FAILURES AVAILABLE. ☒ S ☐ M ☐ U ☐ NA

5. ALL NEEDED TREATMENT UNITS IN SERVICE. ☐ S ☒ M ☐ U ☐ NA

6. ADEQUATE NUMBER OF QUALIFIED OPERATORS PROVIDED. ☒ S ☐ M ☐ U ☐ NA

7. SPARE PARTS AND SUPPLIES INVENTORY MAINTAINED. ☒ S ☐ M ☐ U ☐ NA

8. OPERATION AND MAINTENANCE MANUAL AVAILABLE. ☒ Y ☐ N ☐ NA

STANDARD OPERATING PROCEDURES AND SCHEDULES ESTABLISHED. ☒ Y ☐ N ☐ NA

PROCEDURES FOR EMERGENCY TREATMENT CONTROL ESTABLISHED. ☒ Y ☐ N ☐ NA

Introduction

On November 14, 2016 a Compliance Evaluation Inspection was conducted at the City of Tucumcari Waste Water Treatment Plant (WWTP) by Barbara Cooney, of the New Mexico Environment Department (NMED), Surface Water Quality Bureau (SWQB), Point Source Regulation Section (PSRS).

The inspection was conducted by NMED for the US Environmental Protection Agency (USEPA), Region VI, under the NPDES permit program, in accordance with the federal Clean Water Act. These inspections are conducted under contract with the USEPA and are used to evaluate compliance with the NPDES permit program. This inspection report is based on information supplied by the City of Tucumcari representatives (the permittee), observations made by the NMED Inspector, reports and records kept by the permittee and/or NMED.

The City of Tucumcari WWTP is classified as a major municipal discharger under the Federal Clean Water Act (CWA), section 402 National Pollutant Discharge Elimination System (NPDES) permit program, and is assigned permit number NM0020711. The Standard Industrial Classification Code (SIC) is 4952. Effluent flows through an underground pipe for approximately 2.0 miles to Breen's pond. Overflow from the pond is discharged to No Name Creek and travels approximately one mile to Pajarito Creek, a perennial tributary to the Canadian River in Water Quality Segment 20.6.4.303. The designated uses are irrigation, marginal warmwater aquatic life, livestock watering, wildlife habitat and primary contact.

Inspection Details

The inspector arrived at the WWTP at 12:30 hours on November 14, 2016, showed credentials, and discussed the purpose of the inspection with Mr. Calvin Henson, Water and Wastewater Superintendent and Janet Garcia, Laboratory Manager. The inspector and City of Tucumcari representatives also made site visits to manholes in the collection system and to Breen's Pond. An exit interview was conducted with, Mr. Henson and Ms. Garcia. The inspector left the City facilities at 17:50 hours.

Treatment Units

There are eleven lift stations within the City's collection system that deliver raw sewage to the WWTP. Each lift station has two pumps. Movable pumps are available for back-up if lift stations fail. Alarms are located at four of the eleven lift stations and are sounded in the event of an overflow. Two portable generators are available at the WWTP to provide power for the lift station pumps in the event of a power outage. The lift station at the KOA campground accumulates waste from an area that is isolated from the rest of the collection system because of a collapsed collection line under the highway. A vactor truck is parked at this location and pumps out the wet well daily, depositing the waste to the collection system on the other side of the collapsed line. The City also accepts industrial waste into the collection system from the Tucumcari Mountain Cheese Factory, motels, restaurants, gas stations, and laundromats. A septage hauler dump station is located at the WWTP. Influent from domestic and industrial sources enters the headworks where it passes through a fine mesh bar screen and aerated grit chamber equipped with an influent wet-well lift station that houses three 25-hp Flygt submersible pumps with variable frequency drives.

The current WWTP was completed in the fall of 2011. At the same time, the City of Tucumcari collaborated with New Mexico State University's Tucumcari Science Center to construct a water reuse storage pond for the treated effluent, pump station, and pipeline for a water conservation and reuse project at the research facility.

The Tucumcari WWTP is a Medium Rate Activated Sludge facility (MRAS), a process that may also incorporate biological nutrient removal by altering aeration cycling and with possible additions of tertiary treatment. Parallel treatment trains are available so one side may be taken off line while being serviced or if the influent flow volume is low. The improvements at the WWTP are extensive and include upgrades to the headworks, new splitter boxes, rehabilitation of the primary clarifiers, new MRAS basins, secondary clarifiers, UV disinfection, a blower/pump building, sludge drying and composting pads, and a new laboratory and administration building. Rehabilitation of the anaerobic and aerobic sludge digesters, include replacement of the floating roof with a fixed roof over the anaerobic digester and reinforcement/repairs to the concrete structures.

The MRAS plant has a capacity of 1.2 MGD with a current average daily flow of 0.48 MGD. The plant size was built based on 20-year population increase projection. Presently there is only one of the two treatment trains in use. Reuse water is being kept in the second train to protect the piping and other treatment works from solar and weather damage.

Sludge

Following anaerobic then aerobic digestion and dewatering, solids are composted on site and given free of charge to local users. Grit and larger solids removed from the headworks are sent to the county landfill after passing the paint filter test.

Further Explanations

Note: The sections are arranged according to the format of the enclosed EPA Inspection Checklist (Form 3560-3), rather than being ranked in order of importance. A section for Pre Treatment is included in this report following Sludge Handling.

Section A – Permit Verification – Overall Rating of "Satisfactory"

Section B – Record Keeping and Reporting – Overall Rating of "Satisfactory"

Section C - Operation and Maintenance – Overall Rating of "Marginal"

Permit Requirements for Operation and Maintenance

The permit requires, in Part III, Section B.3. Proper Operation and Maintenance:

> *a. The permittee shall at all times properly operate and maintain all facilities and system of treatment and control (and related appurtenances) which are installed or used by permittee as efficiently as possible and in a manner which will minimize upsets and discharges of excessive pollutants and will achieve compliance with the conditions of this permit...*
>
> *5. UPSET CONDITIONS*
> *a. EFFECT OF AN UPSET*
> *An upset constitutes an affirmative defense to an action brought for noncompliance with such technology-based permit effluent limitations if the requirements of Part III.B.5.b. are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.*
> *b. CONDITIONS NECESSARY FOR A DEMONSTRATION OF UPSET*
> *A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:*
> *(1) An upset occurred and that the permittee can identify the cause(s) of the upset;*

(2) The permitted facility was at the time being properly operated;
(3) The permittee submitted notice of the upset as required by Part III.D.7; and,
(4) The permittee complied with any remedial measures required by Part III.B.2.

Findings for Operation and Maintenance
During the site visit and the records review of the WWTP, the following observations were made:

1. Floating white material was observed on the surface of both the primary and secondary clarifiers. The floating solids were more apparent on the secondary clarifier after biological treatment and other process had removed the majority of the solids.

2. A portion of the collection system under the Interstate 40 is collapsed and has been for more than a year. Operators use a vactor truck daily to remove accumulated waste from a wet well on the far side of the collapsed line at the KOA campground. It is advisable for the permittee to contact the Department of Transportation or Federal Highway Administration to correct and/or replace the collapsed line. There was no evidence at the wet well of spillage and overflow.

3. Cheese Factory – In previous inspection reports, the permittee was advised, that this industrial waste stream to the WWTP should be monitored closely. The permit requires the WWTP to reject any waste that could potentially cause harm to or interfere with the treatment process.

It was observed that floating white substances were present in the primary and secondary clarifiers. This white substance is suspected to be from the Cheese Factory waste.

Since the last inspection the permittee has developed a pre-treatment program and sewer ordinances, with local limits, monitoring requirements and enforcement penalties to be applied for non-compliance from the contributing industry (see attached ordinances). However, monitoring records provided by the permittee showed data on a periodic basis rather than consistent monitoring.
The cheese factory has installed a holding tank however the city has no control over the release of the waste into the collection system. The permittee is not following their own sewer ordinances to protect the WWTP operations.

Section D – Self Monitoring – Overall Rating of "Marginal"

Permit Requirements for Self Monitoring
The permit requires in Part 1. C. Monitoring and Reporting:
1. Monitoring and Reporting
a. The permittee shall effectively monitor the operation and efficiency of all treatment and control facilities and the quantity and quality of the treated discharge.

Findings for Self Monitoring
1. The permittee is not monitoring the volume of the pollutants entering the collection system from the contributing industry, The Tucumcari Mountain Cheese Factory nor from other potential industrial contributors, such as gas stations, motels and laundromats. This is the reason for the Marginal rating. The permittee is basing volumes for the Cheese Factory discharge on the drinking water meter that delivers potable water to the business. There is no flow meter for the discharge from the facility nor from the holding tank.

Section E – Flow Measurements – Overall Rating of "Not Evaluated"

Section F - Laboratory - Overall Rating of "Satisfactory"

Permit Requirements for Laboratory

The permit requires, in Part III, Section B.3. Proper Operation and Maintenance

a. …Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures…

The permit requires, in Part III, Section 5. Monitoring Procedures

a. Monitoring must be conducted according to test procedures approved under 40 CFR Part 136, unless other test procedures have been specified in the permit or approved by the Regional Administrator.

Findings for Laboratory

1. The laboratory was inspected and records were reviewed for the third quarter 2016. There were no adverse findings.

Section G - Effluent and Receiving Water - Overall Rating "Marginal"

Permit Requirements for Effluent / Receiving Waters

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge treated domestic wastewater from Outfall 001 to Breen's pond. Such discharges shall be limited and monitored by the permittee and reported as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
POLLUTANT	MINIMUM	MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	6.6 s.u.	9.0 s.u.	Daily	Instantaneous Grab

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS						MONITORING REQUIREMENTS	
	lbs/day, unless noted			mg/l, unless noted (*1)				
POLLUTANT	30-DAY AVG	7-DAY AVG	DAILY MAX	30-DAY AVG	7-DAY AVG	DAILY MAX	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	Report MGD	Report MGD					Daily	Totalized Meter
BOD	230	345	N/A	30	45	N/A	1/week	6-hour Composite
BOD, minimum % removal	85						1/week	Calculation (*2)
TSS	230	345	N/A	30	45	N/A	1/week	6-hour Composite
TSS, minimum % removal	85						1/week	Calculation (*2)
E. coli bacteria	4.39 x 10^8 cfu/day	N/A	N/A	126 cfu/100 ml	N/A	410 cfu/100 ml	1/week	Grab (*3)
TRC	N/A	N/A	N/A	N/A	N/A	11 ug/l (*4)	Daily	Instantaneous Grab
Boron	N/A	N/A	7.50[a]	N/A	N/A	750[a] ug/l	1/two weeks	Grab
Total Phosphorus	7.67[a] 0.77[b] 0.23[c]	N/A	N/A	1.0[a] 0.1[b] 0.03[c]	N/A	N/A	1/two weeks	6-hour Composite
Total Nitrogen (*7)	61.4[a] 23.0[b] 3.45[c]	N/A	N/A	8.0[a] 3.0[b] 0.45[c]	N/A	N/A	1/two weeks	6-hour Composite

NPDES PERMIT NO. NM0020711 Page 2 of PART I

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
WHOLE EFFLUENT TOXICITY TESTING 7-DAY CHRONIC NOEC FRESHWATER (*5)	30-DAY AVG	7-DAY MINIMUM	MEASUREMENT FREQUENCY (*6)	SAMPLE TYPE
Ceriodaphnia dubia	100%	100%	Once/Quarter	6-hr Composite
Pimephales promelas	100%	100%	Once/Quarter	6-hr Composite

Footnotes:

*1 See Appendix A of Part II of the permit for minimum quantification limits.
*2 Percent removal is calculated using the following equation:
[average monthly influent concentration (mg/l) – average monthly effluent concentration (mg/l)] ÷[average monthly influent concentration (mg/l)] x 100.
*3 Analyzed within in the maximum holding time specified in 40 CFR 136.
*4 Monitored when chlorine is used. The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes.
*5 Monitoring and reporting requirements begin on the effective date of this permit. See Part II of the permit for WET testing requirements for additional WET monitoring and reporting conditions.
*6 Compliance with the WET limitations is required at the permit expiration date. This permit does not establish requirements to automatically increase the WET testing frequency after a test failure, or to begin a toxicity reduction evaluation (TRE) in the event of multiple failures. However, upon failure of any WET test, the permittee must report the results to EPA and NMED, Surface Water Quality Bureau, in writing, within 5 business days of notification of the test failure. EPA and NMED will review the test results and determine the appropriate action necessary, if any.
*7 Total Nitrogen is defined as Total Kjeldahl Nitrogen plus Nitrate and Nitrite as defined in the TMDL.
a Phase 1-limits shall be effective at the permit expiration date if discharge occurs. Zero discharge is expected at the expiration date.
b Phase 2-limits is contingent. Compliance date will be set if permit is renewed.
c Phase n-limits compliance date shall be set after effective date of phase 2-limits is known.

Finding for Effluent / Receiving Waters

1. Effluent exceedences were reported on the DMRs for pH and E. coli bacteria:

February 2016	E. coli Daily Max 900 cfu/100 ml	Permit Limit 410 cfu
July 2015	pH minimum 6.57 su	Permit Limit 6.6 su
May 2015	E. coli Daily Max 3000 cfu/100 ml	Permit Limit 410 cfu

These effluent excursions are the reason for the marginal rating for this section.

Section H - Sludge Handling and Disposal - Overall Rating of "Satisfactory"

Section Addition – Compliance Schedule – Overall Rating of "Marginal"

Permit Requirements for Compliance Schedule

The permit requires in Part I:

B. SCHEDULES OF COMPLIANCE

The following compliance schedule is applicable to WET limitation, boron, total phosphorus and total nitrogen for phase 1-limits:

Deadline	Item(s) submitted to EPA and NMED
December 31, 2016	Construction of an equalization tank at the cheese plant. Final plan for total reuse of the effluent.
December 31, 2017	Acquisition of properties for the final plan.
December 31, 2018	Final design of the proposed plan.
December 31, 2019	Construction of designed plan.
Permit expiration date	Final project report and request for permit termination if discharge is ceased.

At the end of each deadline, the permittee shall submit a report stating status of the required item(s) above to EPA and NMED. The report(s) may be attached to the next DMRs. If a deadline is not met, the permittee shall explain in writing why the compliance is not met along with corrective action(s) and a schedule to accomplish.

Findings for Compliance Schedule

1. The equalization tank has been installed at the factory but it is not large enough to meet the requirements. The tank does not have any internal gauge so the facility does not know how full it is.

2. The equalization tank overflowed on three days: August 15, 2016 August 17, 2016 and August 22, 2016 sending liquid and solid cheese by-products flowing down the alleys and streets. The volume was unknown. The City of Tucumcari issued fines for this overflow, according to their representatives.

3. The City has no control over the release from the tank or the Cheese Factory to the collection system. According to operators there is suspected to be large discharges over night that are not monitored for volume nor for pH.

4. The permittees sewer ordinance requires:
13.08B.150 - Control manhole.
When required by the city, the owner of any property serviced by a sewer carrying industrial liquid wastes shall install a suitable control manhole together with such necessary meters and other appurtenances to facilitate observation, sampling, and measurement of the wastes.

However, the city has not enforced these requirement for the Cheese factory. The control mechanism according to City representatives do not include:
a. Continuous pH monitoring
b. Control mechanism for the City to allow and/or shut off flow from the holding tank and from the cheese factory.
c. It is advisable for control mechanism from the facility to include: 1. Continuous flow meter and recording. 2. Automatic pump and dosing system for pH neutralization. 3. A shut off value that the city has control of in the event the cheese factory is not meeting pretreatment requirements.
d. The holding capacity of the tank is inadequate – three overflow spills have been reported by residents near the Cheese factory as the waste flowed through the streets.

Section Addition – Pre Treatment – Overall Rating of "Marginal"

Permit Requirements for Pre Treatment
The City of Tucumcari developed a Pre Treatment program, see website:
https://www.municode.com/library/nm/tucumcari/codes/code_of_ordinances?nodeId=TIT13PUSE_CH13.08BPRINSE
The permit requires, in Part Part II C. CONTRIBUTING INDUSTRIES:

> *1. The following pollutants may not be introduced into the treatment facility:*
>
> *a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;*
>
> *b. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works are specifically designed to accommodate such discharges;*
>
> *c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the*

POTW, resulting in Interference;

d. Any pollutant, including oxygen demanding pollutants (e.g., BOD), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW;

e. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 degrees Centigrade (104 degrees Fahrenheit) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits;

f. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and

h. Any trucked or hauled pollutants, except at discharge points designated by the POTW.

2. The permittee shall require any indirect discharger to the treatment works to comply with the reporting requirements of Sections 204(b), 307, and 308 of the Act, including any requirements established under 40 CFR Part 403.

3. The permittee shall provide adequate notice of the following:
a. Any new introduction of pollutants into the treatment works from an indirect discharger which would be subject to Sections 301 and 306 of the Act if it were directly discharging those pollutants; and

b. Any substantial change in the volume or character of pollutants being introduced into the treatment works by a source introducing pollutants into the treatment works at the time of issuance of the permit.

Any notice shall include information on (i) the quality and quantity of effluent to be introduced into the treatment works, and (ii) any anticipated impact of the change on the quality or quantity of effluent to be discharged from the POTW.

4. The POTW shall develop and enforce specific effluent limits for Industrial User(s), and all other users, as appropriate, which, together with appropriate changes in the POTW Treatment Plant's facilities or operation, are necessary to ensure renewed and continued compliance with the POTW1s NPDES permit or sludge use or disposal practices.

Findings for Pre Treatment

1. The City developed a pretreatment program including updated sewer ordinances (see attachment). However, the city is not consistently enforcing these ordinances.

2. The permittee is not monitoring flow from the Tucumcari Mountain Cheese Factory. As stated above; nor controlling the flow volume and time of discharge from the Cheese Factory to the collection system and the WWTP.

4. The permittee relies on the factory to provide pH data and the readings listed are not being taken throughout the time of discharge, pH below allowable levels is being discharged to the sewer system according City personnel based on previous testing. Those sample results of pH below 5.0 were not presented to the inspector for verification.

5. The factory did install a holding tank but it is under-sized at 20,000 gallons' capacity. According to city representatives, the size required by an engineering review was 60,000 gallons.

6. A phone call from the factory owner and the inspector indicated the facility is planning expansion of production and will need an even larger holding capacity.

7. The City has records of water used from the Drinking Water meters, but does not have an effluent meter so flow volumes are approximate.

Tucumcari Wastewater Treatment Plant	**PERMIT NO. NM0020711**

SECTION C - OPERATIONS AND MAINTENANCE (CONT'D)

9. HAVE BYPASSES/OVERFLOWS OCCURRED AT THE PLANT OR IN THE COLLECTION SYSTEM IN THE LAST YEAR?	☒ Y ☐ N ☐ NA
IF SO, HAS THE REGULATORY AGENCY BEEN NOTIFIED?	☒ Y ☐ N ☐ NA
HAS CORRECTIVE ACTION BEEN TAKEN TO PREVENT ADDITIONAL BYPASSES/OVERFLOWS?	☐ Y ☒ N ☐ NA
10.HAVE ANY HYDRAULIC OVERLOADS OCCURRED AT THE TREATMENT PLANT?	☐ Y ☒ N ☐ NA
IF SO, DID PERMIT VIOLATIONS OCCUR AS A RESULT?	☐ Y ☐ N ☒ NA

SECTION D - SELF-MONITORING

PERMITTEE SELF-MONITORING MEETS PERMIT REQUIREMENTS. ☐ S ☒ M ☐ U ☐ NA *(FURTHER EXPLANATION ATTACHED Yes)*.
DETAILS:
There are no records of the volume and the quality of waste entering the system from the Tucumcari Mountain Cheese Factory as required in Part II of the permit. This is the reason for the Marginal rating for this section.

1. SAMPLES TAKEN AT SITE(S) SPECIFIED IN PERMIT.	☒ Y ☐ N ☐ NA
2. LOCATIONS ADEQUATE FOR REPRESENTATIVE SAMPLES.	☒ Y ☐ N ☐ NA
3. FLOW PROPORTIONED SAMPLES OBTAINED WHEN REQUIRED BY PERMIT.	☒ Y ☐ N ☐ NA
4. SAMPLING AND ANALYSES COMPLETED ON PARAMETERS SPECIFIED IN PERMIT.	☒ Y ☐ N ☐ NA
5. SAMPLING AND ANALYSES PERFORMED AT FREQUENCY SPECIFIED IN PERMIT.	☒ Y ☐ N ☐ NA
6. SAMPLE COLLECTION PROCEDURES ADEQUATE	☒ Y ☐ N ☐ NA
a) SAMPLES REFRIGERATED DURING COMPOSITING.	☒ Y ☐ N ☐ NA
b) PROPER PRESERVATION TECHNIQUES USED.	☒ Y ☐ N ☐ NA
c) CONTAINERS AND SAMPLE HOLDING TIMES CONFORM TO 40 CFR 136.3.	☒ Y ☐ N ☐ NA
7. IF MONITORING AND ANALYSES ARE PERFORMED MORE OFTEN THAN REQUIRED BY PERMIT, ARE THE RESULTS REPORTED IN PERMITTEE'S SELF-MONITORING REPORT?	☒ Y ☐ N ☐ NA

SECTION E - FLOW MEASUREMENT

PERMITTEE FLOW MEASUREMENT MEETS PERMIT REQUIREMENTS. ☐ S ☐ M ☐ U ☒ NA *(FURTHER EXPLANATION ATTACHED No)*
DETAILS: Not Evaluated – Due to time limitation

1. PRIMARY FLOW MEASUREMENT DEVICE PROPERLY INSTALLED AND MAINTAINED. TYPE OF DEVICE	☐ Y ☐ N ☒ NA
2. FLOW MEASURED AT EACH OUTFALL AS REQUIRED.	☐ Y ☐ N ☒ NA
3. SECONDARY INSTRUMENTS (TOTALIZERS, RECORDERS, ETC.) PROPERLY OPERATED AND MAINTAINED.	☐ Y ☐ N ☒ NA
4. CALIBRATION FREQUENCY ADEQUATE. *(DATE OF LAST CALIBRATION)*	☐ Y ☐ N ☒ NA
RECORDS MAINTAINED OF CALIBRATION PROCEDURES.	☐ Y ☐ N ☒ NA
CALIBRATION CHECKS DONE TO ASSURE CONTINUED COMPLIANCE.	☐ Y ☐ N ☒ NA
5. FLOW ENTERING DEVICE WELL DISTRIBUTED ACROSS THE CHANNEL AND FREE OF TURBULENCE.	☐ Y ☐ N ☒ NA
6. HEAD MEASURED AT PROPER LOCATION.	☐ Y ☐ N ☒ NA
7. FLOW MEASUREMENT EQUIPMENT ADEQUATE TO HANDLE EXPECTED RANGE OF FLOW RATES.	☐ Y ☐ N ☒ NA

SECTION F – LABORATORY

PERMITTEE LABORATORY PROCEDURES MEET PERMIT REQUIREMENTS. ☒ S ☐ M ☐ U ☐ NA *(FURTHER EXPLANATION ATTACHED No)*
DETAILS:

1. EPA APPROVED ANALYTICAL PROCEDURES USED *(40 CFR 136.3 FOR LIQUIDS, 503.8(b) FOR SLUDGES)*	☒ Y ☐ N ☐ NA

Tucumcari Wastewater Treatment Plant	PERMIT NO. NM0020711

SECTION F - LABORATORY (CONT'D)

2. IF ALTERNATIVE ANALYTICAL PROCEDURES ARE USED, PROPER APPROVAL HAS BEEN OBTAINED ☐ Y ☐ N ☒ NA

3. SATISFACTORY CALIBRATION AND MAINTENANCE OF INSTRUMENTS AND EQUIPMENT. ☒ S ☐ M ☐ U ☐ NA

4. QUALITY CONTROL PROCEDURES ADEQUATE. ☒ S ☐ M ☐ U ☐ NA

5. DUPLICATE SAMPLES ARE ANALYZED. 10 % OF THE TIME. ☒ Y ☐ N ☐ NA

6. SPIKED SAMPLES ARE ANALYZED. 8 % OF THE TIME. Once a year as part of the DMR-QA study ☒ Y ☐ N ☐ NA

7. COMMERCIAL LABORATORY USED. ☒ Y ☐ N ☐ NA

LAB NAME Bio Aquatics
LAB ADDRESS 2501 Mayes Rd. Ste. 100 Carrollton, TX 75006
PARAMETERS PERFORMED WET Test

SECTION G - EFFLUENT/RECEIVING WATERS OBSERVATIONS. ☐ S ☒ M ☐ U ☐ NA *(FURTHER EXPLANATION ATTACHED Yes).*

OUTFALL NO.	OIL SHEEN	GREASE	TURBIDITY	VISIBLE FOAM	FLOAT SOL.	COLOR	OTHER
001	None	None	None	None	None	Clear	

RECEIVING WATER OBSERVATIONS
Effluent Exceedence– See Further Explanation Section of the Report

SECTION H - SLUDGE DISPOSAL

SLUDGE DISPOSAL MEETS PERMIT REQUIREMENTS. ☒ S ☐ M ☐ U ☐ NA *(FURTHER EXPLANATION ATTACHED No).*
DETAILS:

1. SLUDGE MANAGEMENT ADEQUATE TO MAINTAIN EFFLUENT QUALITY. ☒ S ☐ M ☐ U ☐ NA

2. SLUDGE RECORDS MAINTAINED AS REQUIRED BY 40 CFR 503. ☒ S ☐ M ☐ U ☐ NA

3. FOR LAND APPLIED SLUDGE, TYPE OF LAND APPLIED TO: Composted for town and domestic use (e.g., FOREST, AGRICULTURAL, PUBLIC CONTACT SITE)

SECTION I - SAMPLING INSPECTION PROCEDURES *(FURTHER EXPLANATION ATTACHED No).*

1. SAMPLES OBTAINED THIS INSPECTION. ☐ Y ☒ N ☐ NA

2. TYPE OF SAMPLE OBTAINED

GRAB _____ COMPOSITE SAMPLE ___ METHOD _____ FREQUENCY

3. SAMPLES PRESERVED. ☐ Y ☐ N ☒ NA

4. FLOW PROPORTIONED SAMPLES OBTAINED. ☐ Y ☐ N ☒ NA

5. SAMPLE OBTAINED FROM FACILITY'S SAMPLING DEVICE. ☐ Y ☐ N ☒ NA

6. SAMPLE REPRESENTATIVE OF VOLUME AND MATURE OF DISCHARGE. ☐ Y ☐ N ☒ NA

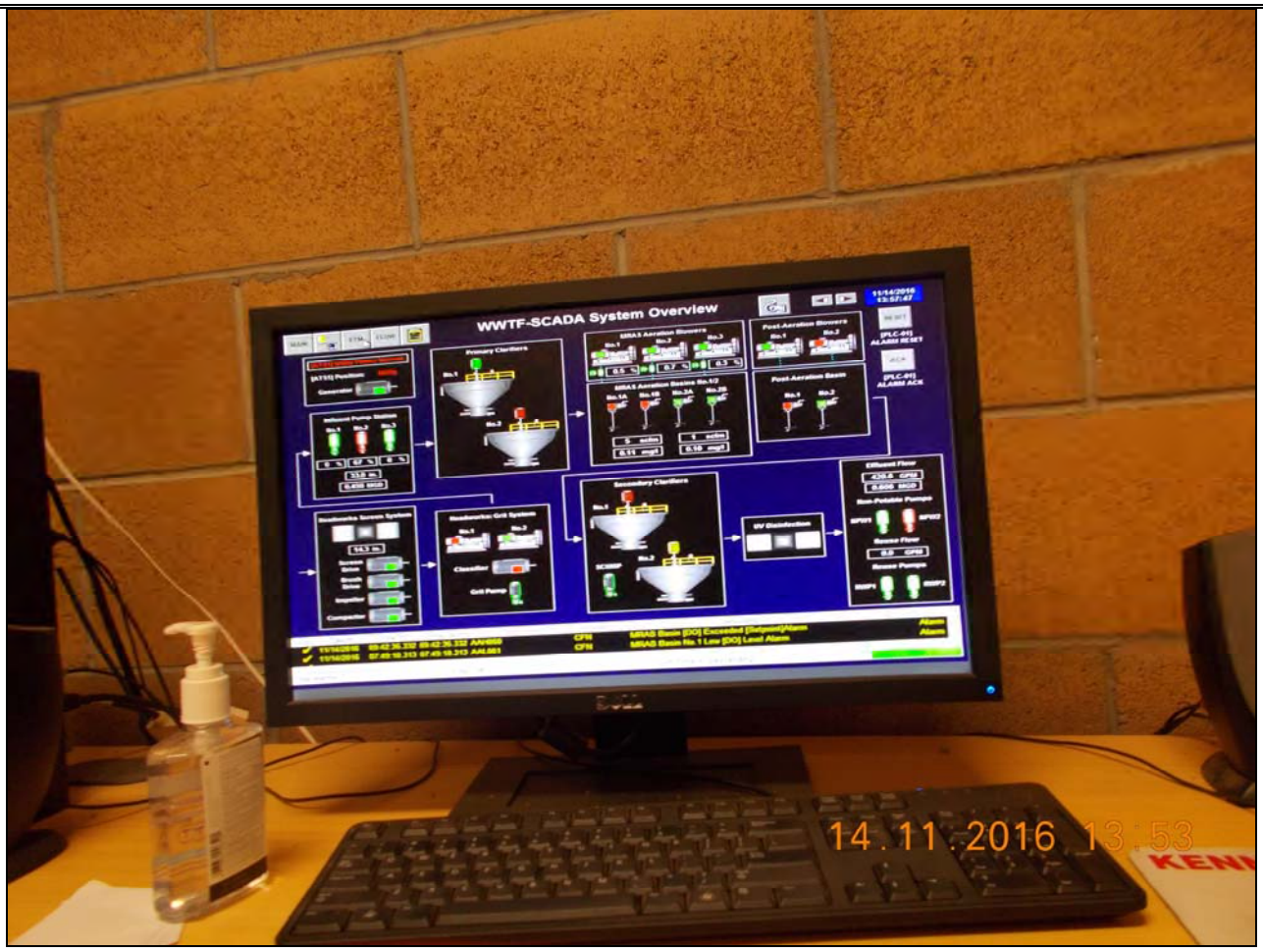
7. SAMPLE SPLIT WITH PERMITTEE. ☐ Y ☐ N ☒ NA

8. CHAIN-OF-CUSTODY PROCEDURES EMPLOYED. ☐ Y ☐ N ☒ NA

9. SAMPLES COLLECTED IN ACCORDANCE WITH PERMIT. ☐ Y ☐ N ☒ NA

`NMED/SWQB **Official Photograph Log** **Photo # 1**		
Photographer: Google Earth	Date: March 9, 2014	Time: Unknown
City/County: Tucumcari / Quay		State: New Mexico
Location: City of Tucumcari Wastewater Treatment Plant		
Subject: Google Earth Aerial View of the Wastewater Treatment Plant		

`NMED/SWQB Official Photograph Log Photo # 2		
Photographer: Barbara Cooney	Date: November 14, 2016	Time: 13:53 Hours
City/County: Tucumcari / Quay		State: New Mexico
Location: City of Tucumcari Wastewater Treatment Plant		
Subject: SCADA plant operating system shows the status of each treatment unit.		



NMED/SWQB Official Photograph Log Photo # 3		
Photographer: Barbara Cooney	Date: November 14, 2016	Time: 14:46 Hours
City/County: Tucumcari / Quay		State: New Mexico
Location: City of Tucumcari Wastewater Treatment Plant		
Subject: Manhole where the waste from the cheese factory meets the domestic waste in the collection system.		

NMED/SWQB Official Photograph Log Photo # 4		
Photographer: Barbara Cooney	Date: November 14, 2016	Time: 14:47 Hours
City/County: Tucumcari / Quay		State: New Mexico
Location: City of Tucumcari Wastewater Treatment Plant		
Subject: Manhole at the sewer line where the waste from the cheese factory meet domestic waste. The white is from the cheese factory. The cheese factory has a holding tank that they have chosen to not use and the city had no control of the flow from that facility at the time of the inspection.		

NMED/SWQB Official Photograph Log Photo # 5		
Photographer: Barbara Cooney	Date: November 14, 2016	Time: 15:01 Hours
City/County: Tucumcari / Quay		State: New Mexico
Location: City of Tucumcari Wastewater Treatment Plant		
Subject: KOA campground the old clay pipe has collapses from this location and under Interstate 25 where the line is located as it connects to the rest of the City's system. Until a new collection line is constructed, the town must vactor out of this wet well daily then drain the vactor truck to another manhole closer to the WWTP. Collapsed clay lines and older cast iron lines are a common problem in old collection systems that have not been upgraded. According to operators the bedding for the sewer line was not properly laid when the Highway was built causing the compression that collapsed the line.		

NMED/SWQB Official Photograph Log Photo # 6		
Photographer: Barbara Cooney	Date: November 14, 2016	Time: 14:30 Hours
City/County: Tucumcari / Quay		State: New Mexico
Location: City of Tucumcari Wastewater Treatment Plant		
Subject: Septage receiving station at the WWTP the tines of the bar screed are several inches apart allowing many large solids to pass through. The receiving station is only open during normal business hours and haulers must sign a log. The septage is not tested for pH though. Operators indicated receipt of approx..4, 500 gallons/day.		

NMED/SWQB Official Photograph Log Photo # 7		
Photographer: Barbara Cooney	Date: November 14, 2016	Time: 14:09 Hours
City/County: Tucumcari / Quay		State: New Mexico
Location: City of Tucumcari Wastewater Treatment Plant		
Subject: Headworks consist of parallel channels, one manual and one with a mechanical grinder and screen. Grit removal is collected, ground, compressed and dumped into a hopper taken to the landfill. Following grit remover are 3 Flygt pumps that are on floats.		

NMED/SWQB Official Photograph Log Photo # 8		
Photographer: Barbara Cooney	Date: November 14, 2016	Time: 14:05 Hours
City/County: Tucumcari / Quay		State: New Mexico
Location: City of Tucumcari Wastewater Treatment Plant		
Subject: Headworks consist of parallel channels, one manual and one with a mechanical grinder and screen. Grit removal is collected, ground, compressed and dumped into a hopper taken to the landfill. Following grit remover are 3 Flygt pumps that are on floats. The pumps use is on rotation to prevent uneven wear.		

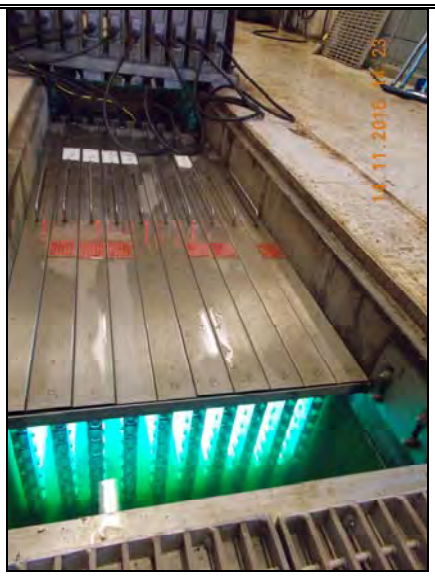
NMED/SWQB Official Photograph Log Photo # 9		
Photographer: Barbara Cooney	Date: November 14, 2016	Time: 13:37 Hours
City/County: Tucumcari / Quay		State: New Mexico
Location: City of Tucumcari Wastewater Treatment Plant		
Subject: Primary clarifiers follow the headworks. Though not obvious in this photo there were some floating white particles in what appeared to be dairy or cheese waste.		

NMED/SWQB Official Photograph Log Photo # 10		
Photographer: Barbara Cooney	Date: November 14, 2016	Time: 13:23 Hours
City/County: Tucumcari / Quay		State: New Mexico
Location: City of Tucumcari Wastewater Treatment Plant		
Subject: The oxidation ditch for extended aeration has a detention time (DT) of approximately 20 days for the sewage water. Dosing with polyaluminium chloride (PAX-14 ©) to reduce bulking and foaming problems that are aggravated by the high volumes of waste from the cheese factory. There was very little foam present and staining on the walls of the basin did not show a high volume of foam at other times. The addition of PAX-14 also allows for better solids separation. The aeration on and off cycles vary depending on season. In winter the air is on for 1.5 hours and off for 1 hour. The Dissolved Oxygen sensor are mounted on the crosswalk in the photo below and during the aeration phase DO is 4 -6 mg/L and in the anoxic phase Do is 0.06 mg/L. The basin at the time of this photo was in an anoxic phase with the bottom mixers on.		

NMED/SWQB Official Photograph Log Photo # 11		
Photographer: Barbara Cooney	Date: November 14, 2016	Time: 13:50 Hours
City/County: Tucumcari / Quay		State: New Mexico
Location: City of Tucumcari Wastewater Treatment Plant		
Subject: The blowers for the aeration basins are fixed rate and not variable speed. Operators indicated the blower are oversized for a single basin. The blowers are run one at a time and use is rotated between them to minimize wear on any one blower.		

NMED/SWQB Official Photograph Log Photo # 12		
Photographer: Barbara Cooney	Date: November 14, 2016	Time: 13:54 Hours
City/County: Tucumcari / Quay		State: New Mexico
Location: City of Tucumcari Wastewater Treatment Plant		
Subject: Decant from the aeration basin is sent to the secondary clarifier. The sludge blanket in the secondary clarifier is 1.5 feet think. Operators keep a low sludge blanket as a way to accommodate the impacts from the cheese factory. A layer of white flecks of material was evident across the top of the basin. Even with the use of the PAX-14 it was not able to bind with or reduce the presence of the floating cheese waste product. It appeared that most of the floating material was scraped off with the surface skimmer and deposited in the scum trough to be wasted in the sludge digester.		

NMED/SWQB Official Photograph Log Photo # 13		
Photographer: Barbara Cooney	Date: November 14, 2016	Time: 14:23 Hours
City/County: Tucumcari / Quay		State: New Mexico
Location: City of Tucumcari Wastewater Treatment Plant		
Subject: Decant from the secondary clarifiers is sent to the Ultraviolet Disinfection channel consisting of 10 banks of lights with 8 bulbs each.		



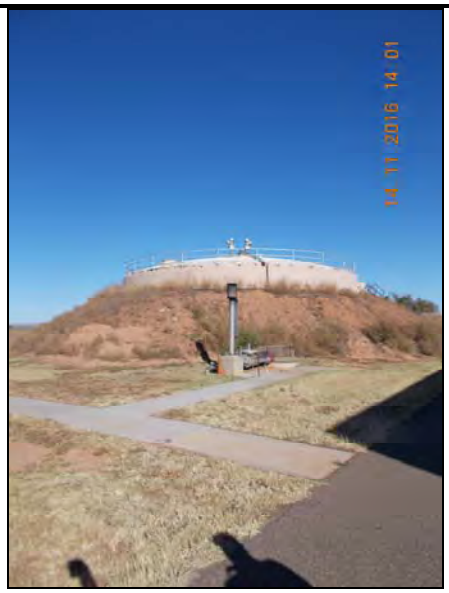
NMED/SWQB Official Photograph Log Photo # 14		
Photographer: Barbara Cooney	Date: November 14, 2016	Time: 14:26 Hours
City/County: Tucumcari / Quay		State: New Mexico
Location: City of Tucumcari Wastewater Treatment Plant		
Subject: Following disinfection effluent is collected and sampled for the NPDES permit and the Ground Water permit requirements.		

NMED/SWQB Official Photograph Log Photo # 15		
Photographer: Barbara Cooney	Date: November 14, 2016	Time: 15:21 Hours
City/County: Tucumcari / Quay		State: New Mexico
Location: City of Tucumcari Wastewater Treatment Plant		
Subject: Subject: Treated effluent is either sent to Breen's pond or to a holding pond for reuse by New Mexico State. Effluent Weir from Breen's Pond to No Name Creek, below Breen's Pond, had no water running through it at the time of this inspection. 100% of the water was being diverted in a PVC pipe for agricultural irrigation.		

NMED/SWQB Official Photograph Log Photo # 16 & 17		
Photographer:	Date: November 14, 2016	Time: 15:23 Hours
City/County: Tucumcari / Quay		State: New Mexico
Location: Tucumcari WWTP – Breen's Pond outfall weir.		
Subject: Subject: Effluent Weir from Breen's Pond to No Name Creek, had no water running through it at the time of this inspection. The weir was blocked with a board and debris. The flow was being diverted through an approximately 6 inch PVC pipe to agricultural fields.		

NMED/SWQB Official Photograph Log Photo # 18		
Photographer: Barbara Cooney	Date: November 14, 2016	Time: 15:23 Hours
City/County: Tucumcari / Quay		State: New Mexico
Location: City of Tucumcari Wastewater Treatment Plant		
Subject: No Name Creek, below Breen's Pond, had no water running through it at the time of this inspection.		

NMED/SWQB Official Photograph Log Photo # 19 & 20		
Photographer: Barbara Cooney	Date: November 14, 2016	Time: 14:01 Hours & 13:42 Hours
City/County: Tucumcari / Quay		State: New Mexico
Location: City of Tucumcari Wastewater Treatment Plant		
Subject: Anaerobic digester on the left and aerobic holding tank on the right. Sludge is sent from the second tank to the drying beds. Decant is sent back to the headworks splitter box before the aeration basins.		



NMED/SWQB Official Photograph Log Photo # 21		
Photographer: Barbara Cooney	Date: November 14, 2016	Time: 14:13 Hours
City/County: Tucumcari / Quay		State: New Mexico
Location: City of Tucumcari Wastewater Treatment Plant		
Subject: Sludge drying bed and composting pad with piles of dried sludge in the background.